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**Remarks**

Claims 1-19 are pending, and the pending claims stand rejected on various grounds, as addressed in more detail below. Claims 3-8, 11, and 15-16 are being canceled. Claims 1, 9, 10 and 18 are being amended, and new claims 20 and 21 are added.

No new matter has been added by these amendments. Claim 1 is amended to incorporate limitations from claims 4 and 8, and to overcome the § 112 rejection by correcting the claim to recite that adjacent R<sup>5</sup> and R<sup>6</sup> groups may combine to form 5- and 6- membered rings, which may be substituted or unsubstituted (specification, page 4, lines 14-15). Claim 9 is also amended to correct dependence. Claim 10 is amended to correct dependence. Claim 18 is amended to specify a device comprising a compound that is electroluminescent and has blue luminescence. These amendments are supported in the specification at page 7, lines 12-15; page 21, lines 1-16; page 23, lines 5-6 and 13-16 and 17-27; and page 24, lines 3-10. New claims 20 and 21 are supported at page 4, line 29. The amended claims and new claims are within the scope of the original claims, so that new searching will not be required.

The specification is also being amended to supply missing information, previously unknown, on related application data and to provide additional related application and application priority information.

**Anticipation Rejections Overcome or Rendered Moot by Amendments**

The rejections based on 35 U.S.C. § 102(b) or § 102(e) have been either overcome or rendered moot by claim amendments and cancellations. Briefly, Petrov is overcome or moot because the claims are directed to devices comprising compounds other than L<sub>3</sub>M complexes. The instant claim 1 has been amended to recite that  $m = 2$ ,  $y = 1$  and  $z = 0$ . Ise does not apply as an anticipating reference because, at least, the claimed L' ligands are distinct from any disclosed in that reference. Igarashi does not apply because the ancillary ligands in that reference are N-analogs of  $\beta$ -enolate ligands, which have been canceled from the pending claims. This observation should also remove the second citation to Igarashi, paragraph 7, pages 5-6 of the Office Action. Grushin does not apply in that claim 11 has been canceled, and Grushin's compounds 2a-d, 2k, 2n and 2u no longer read on claimed compounds. Herron is inapplicable due to amendments and cancellations since all of Herron's complexes require  $m = 1$  and in the

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amended claims,  $m = 2$  and  $z = 0$ . Compounds 10-12 of Ma no longer read on claimed compounds, and Ma's most analogous ligand lacks the  $-R^6$  substituent and ring forming properties of the claims in addition to other features. Similarly, Thompson's disclosure of an ancillary acac ligand lacks the  $-R^6$  substituent and ring forming properties. It is also respectfully submitted that Kamatani is similarly overcome.

Prima Facie Obviousness Not Established

Claims 1-4, 7, 8, 12-16, 18 and 19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Petrov as applied to claims 1-3 and 12-16 in the anticipation rejections and for reasons as further stated in the Office Action, paragraph 11. This rejection relies primarily on the disclosure of compound 1-s in Table 1 and general teachings as summarized in the Action. Compound 1-s is an  $L_3M$  complex of either the Fourth (facial) or Fifth (meridional) Formula of a tris-cyclometalated complex [where the ligands are the same]. The finding that it would have been within the skill of practitioners possessing ordinary skill in the art to substitute an ancillary ligand and change substituent groups and/or combinations is respectfully traversed. There is no teaching or suggestion in Petrov, or grounds to motivate one to modify Petrov, to arrive at the complexes of the amended claims. Applicants respectfully submit that this rejection has been overcome and should not be reapplied.

Claim 9 stands rejected over Ise as applied to claims 1-4, 8, and 12-16 in the anticipation rejections, in further view of Igarashi. The complexes in the latter reference are either of the  $L_3M$  type or disclose ancillary ligands that are N-analogs of claimed  $\beta$ -enolate ligands, which have been canceled from the claims. Where Igarashi discloses an acac ligand (see Compound D, Col. 6), the  $L_2$  ligands are altogether different from those claimed, and to that extent, Igarashi teaches away from either the claimed compounds or combination with, or modification of, Ise to arrive at the claimed compounds. There is no objective showing that it would have been obvious to add the  $-R^6$  substituent groups with ring forming capability to acac to arrive at light emitting or other semiconducting materials. Accordingly, this rejection should be withdrawn and not reapplied.

Claims 17-19 stand rejected over Ma or Thompson as applied to claims 1-4, 7, 8 and 12-16 in the anticipation rejections. This rejection, similar to the others, relies on conclusions as to the level of skill in the art, that a skilled practitioner would know to add an  $-R^6$  substituent to an

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ancillary acac ligand, or add or recombine substituents to arrive at their invention of useful OLED materials and OLED devices comprising them. These bases amount to an "obvious to try" or "invitation to explore" rationale, or hindsight reconstruction, which are not proper rejections under this statute. In addition, it is improper to require that the claims under review be superior to, or provide some advantage over, the prior art. This is especially so in a field such as OLED materials research where results involving color, brightness, processability, compatibility with other materials, lifetime, efficiency, cannot be presumed from chemical structure. Applicants respectfully submit that Kamatani fails for like reasons.

To establish a *prima facie* case of obviousness of the invention *as a whole*, it is necessary to cite (i) one or more references, (ii) available to the inventor, (iii) that teach, (iv) a suggestion to combine or modify the references, (v) such that the combination or modification would appear to be sufficient to have made the claimed invention obvious to one possessing ordinary skill in the art to which the invention pertains or is most closely associated. There must be a reasonable expectation of success in making the taught or suggested modification or combination. Please see MPEP § 706.02(j) and § 2143. The prior art references, when combined, must teach all claim limitations.

To suggest, essentially, that useful materials for OLED devices can be made by moving substituents around or recombining them is insufficient to establish a *prima facie* finding of obviousness over one or more references. The Examiner bears the initial burden of factually supporting a *prima facie* conclusion of obviousness. The MPEP requires that "[w]ith regard to rejections under 35 U.S.C. 103, the examiner must provide the evidence which as a whole shows that the legal determination sought to be proved (i.e., the reference teachings establish a *prima facie* case of obviousness) is more probable than not." MPEP § 2142.

Applicants respectfully submit that obviousness has not been established on any of the grounds stated, especially in light of the foregoing claim amendments and cancellations.

Statutory Double Patenting Rejection Overcome by Amendment

The amendments to claim 18 overcome the "same invention" double patenting rejection. The test recommended by the MPEP for determining whether a double patenting rejection under 35 U.S.C. § 101 is proper is: whether a claim in the application under review could be literally infringed without literally infringing a corresponding claim in the co-pending application.

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MPEP 804.02.II.A. If this literal infringement test is not met, then a statutory or "same invention" double patenting rejection is improper. Alternatively, "Is there an embodiment of the invention that falls within the scope of one claim, but not the other?" Claim 15 in U.S. Application Serial No. 11/315,741 is drawn to a complex, while amended claim 18 is drawn to a device, so it would be possible for an embodiment to fall within the scope of one claim but not the other. Applicants respectfully submit that amended claim 18 overcomes this rejection.

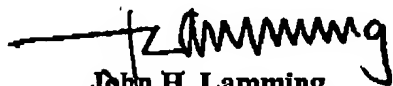
Obviousness-Type Double Patenting Rejections Overcome by Terminal Disclaimer

Terminal disclaimers relating to co-pending applications 11/315,741 and 10/650,323 are being filed concurrently with this paper to overcome these rejections.

**Conclusion**

In light of the foregoing amendments and remarks, as well as the terminal disclaimers being filed concurrently, Applicants respectfully submit that the claims are in condition for allowance, and earnestly solicit a notice of allowance for claims 1, 2, 9, 10, 12, 13, 14, 17, 18, 19, 20 and 21. Applicants note that there was no art-based rejection in the Office Action to claim 10. Should the Examiner have any questions about the content of this paper or the status of the application, the Examiner is invited to call the undersigned at the telephone number listed below.

Respectfully submitted,



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